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# **40 mm Inensitive Munitions for Combat Vehicle Armament**

**presented by**

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# CV 9040



# 40 mm Ammunition Family



PFPPX "3P"  
APFSDS-T



HE-T  
PFHE Mk2  
APDS-T  
TP-T

# 40 mm APFSDS-T

Muzzle velocity 1480 m/s



# 40 mm 3P round

## DATA

Fuze	programmable
Weight of shell	975 g
Weight of explosive	120 g
Type of explosive	PBX
Tungsten pellets, 3 mm	1100

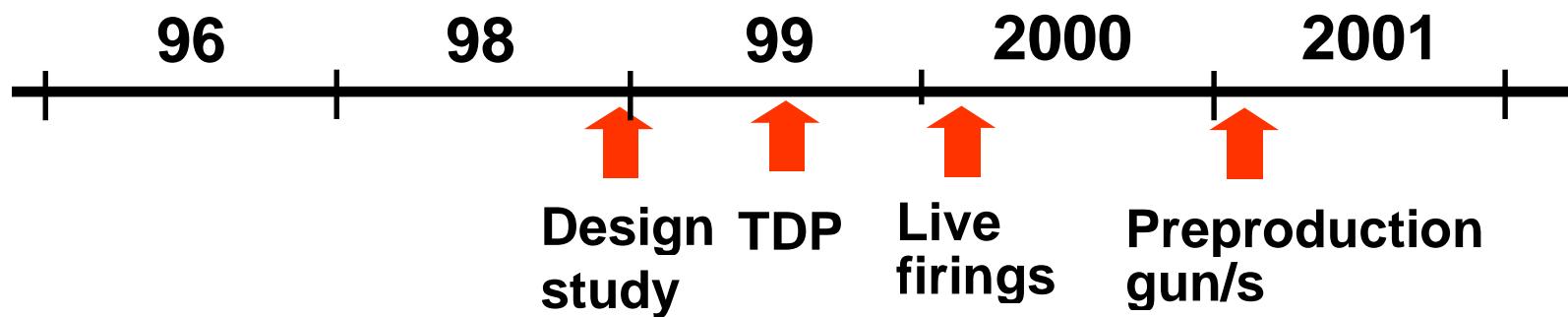


# Function modes 40 mm 3P

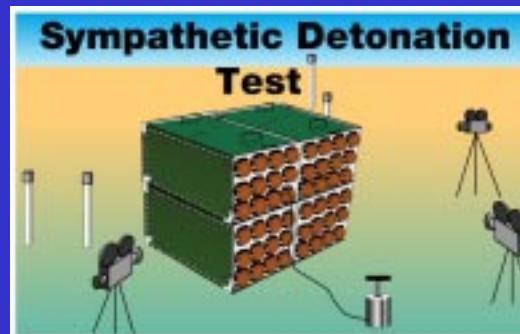
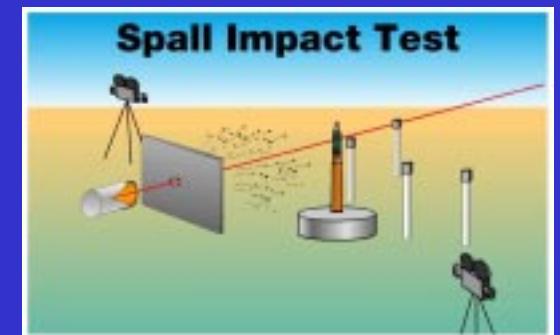
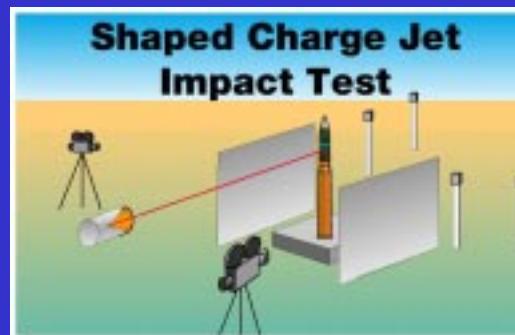
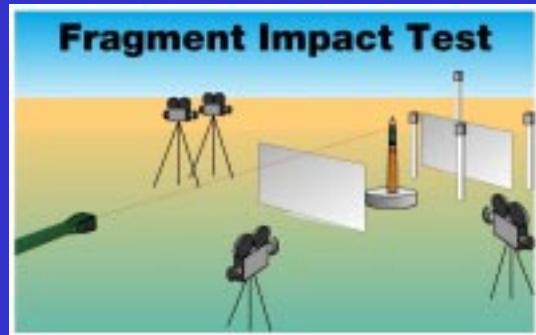
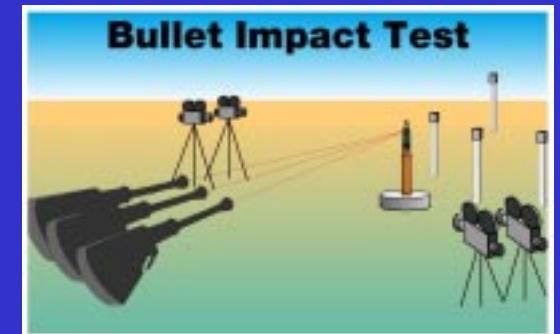
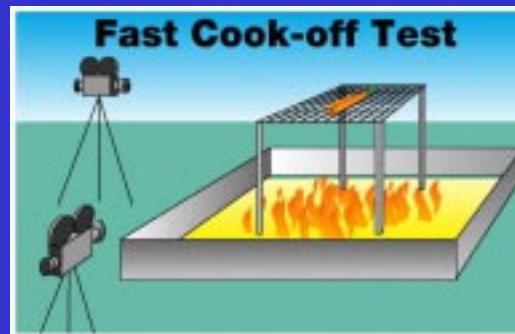
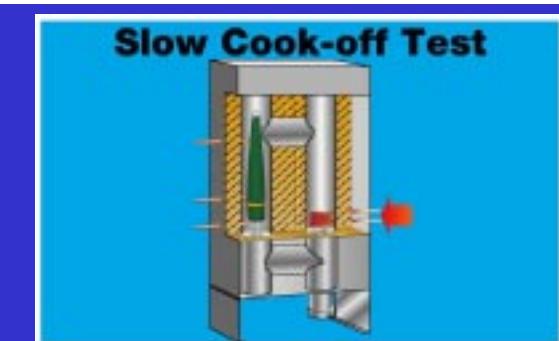


- Basic proximity function
- Gated proximity mode
- Gated proximity mode with impact override
- Impact with post impact delay
- Armour piercing
- Time mode

# 40 mm Bushmaster IV



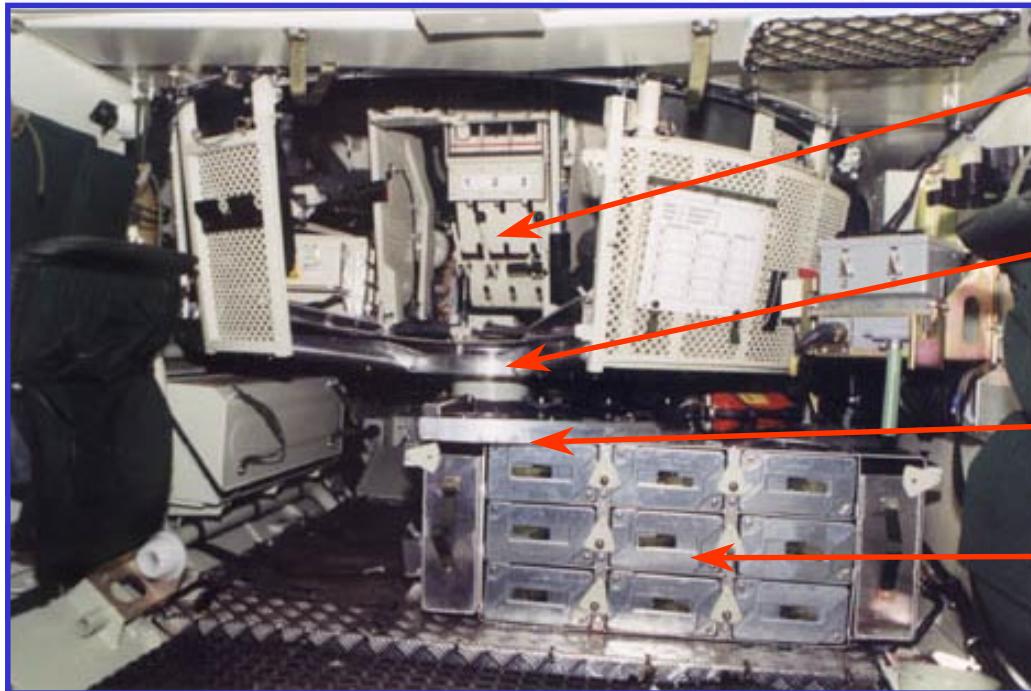
# Mil Std 2105B Tests



# Means of achieving IM/LSM

- Explosives technology
- Mechanical design
- Packaging design

# Ammunition stowage CV 9040



Ak 40/70 Ba: 24 rounds  
(3x8)

Carousel  
magazine: 48 rounds

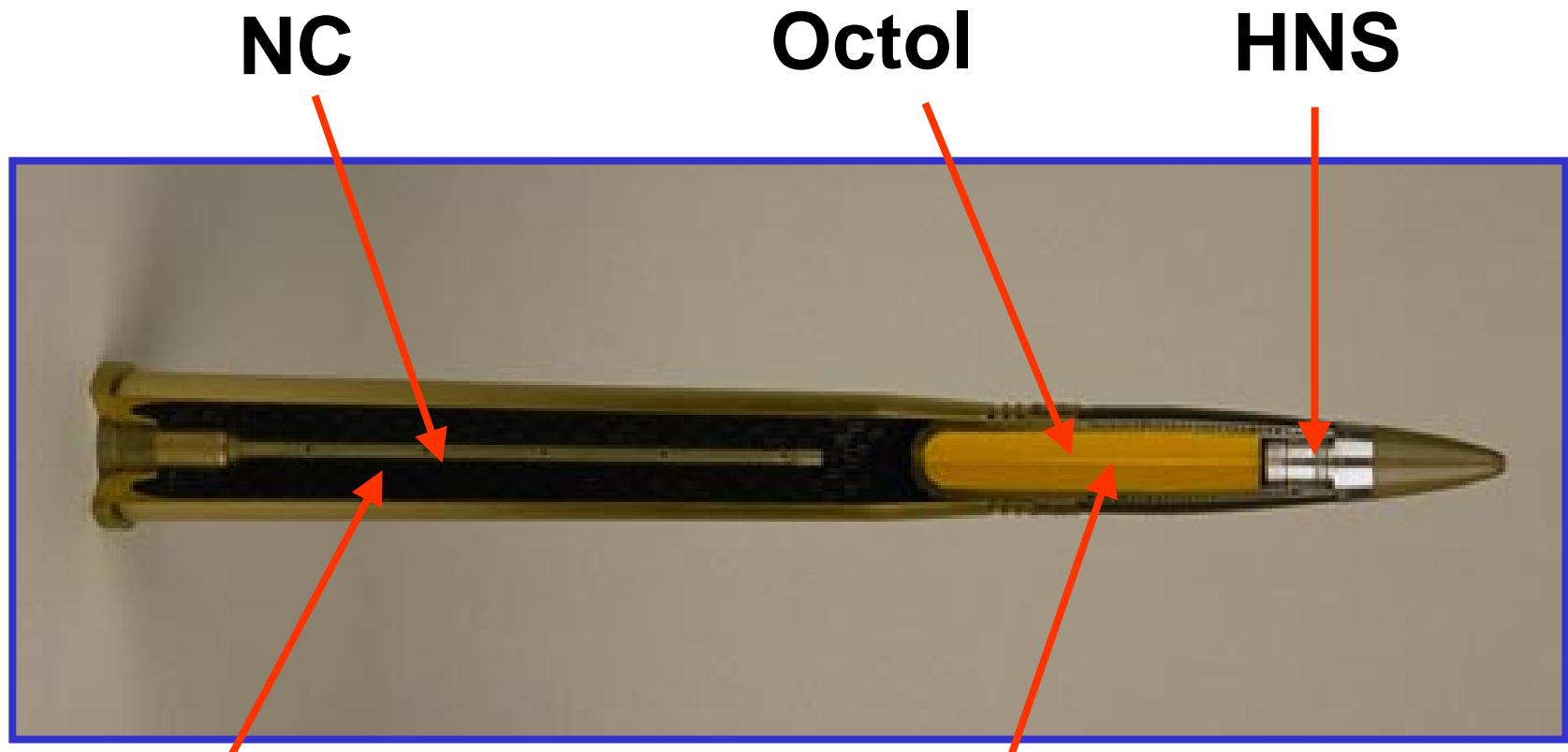
Carousel: 18 rounds

Ammunition  
boxes: 18x8 rounds  
=144 rounds

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Total: 234 rounds

# 3P Explosive content



**LOVA**  
RDX + Plastic

**PBX**  
Octogen + Plastic

# Fragment velocity

Type	Velocity (m/s)
IM	380 - 1330
Conventional	411 - 1502

# Fragment energy

No. of fragments capable of incapacitating  
soldier wearing flak jacket

IM 720

Conventional 785

# Lethal area comparison

Range 1500m, Defending

Octol                    127 m<sup>2</sup>

PBX                    126 m<sup>2</sup>

# Pkill comparison

Heavy attack helicopter Mi-24 Hind, 4-rounds.

Distance	Octol	PBX
1 km	0,95	0,95
2 km	0,76	0,73

# Conclusions

- Available off the shelf
- In average less than 5% in reduction of  $P_{kill}$
- Up to 25 % increase in  $P_{survivability}$  for the vehicle
- Up to 40 % increase in  $P_{survivability}$  for the crew
- Prevents catastrophic kill